



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

PRELIMINARY ISSUE

650.8401

Job Sheet 210964



Part No: 650.8401

Job Qty: 3 pcs

Part Name: Plunger



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 6/29/20

Job Tracking No:

Due Date: 7/15/20

Created By: Jennifer Renwick

Type: SOLD

Description:

Note: 650.8400 REV.PA2 IPP REV:A 20.06.18 NEW ISSUE DD VERF:JFS

Ship Via:

139 Valve

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier	Sign-off
					Setup Hrs	Run Hrs		
100	SL-154 - 1	3 pcs	7/15/20		1.00	0.75	Doosan - 1	
							NLX 2500SY - 1	
							SL-154 - 1	DAS 33 20/07/15
							SL-2500Y - 1	9-89
110	QC 2	3 pcs	7/15/20		0.00	0.00	QC 2 - 1	
							QC 2 - 12	
							QC 2 - 14	
							QC 2 - 17	
							QC 2 - 19	
							QC 2 - 2	
							QC 2 - 20	
							QC 2 - 22	DAS 33 20/07/15
							QC 2 - 23	9-89
							QC 2 - 25	
							QC 2 - 32	
							QC 2 - 33	
							QC 2 - 35	
							QC 2 - 39	
							QC 2 - 4	
							QC 2 - 40	
							QC 2 - 44	
							QC 2 - 45	
							QC 2 - 48	
							QC 2 - 49	
							QC 2 - 50	
							QC 2 - 51	
							QC 2 - 52	
							QC 2 - 57	
							QC 2 - 62	
							QC 2 - 63	
							QC 2 - 8	



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
CANADA
TEL.: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

Container No: S289127



Part: 650.8401

Job No: 210964

Serial No/Batch: S289127

Revision: REV.PA3

Inspector:

Exp Date:

Instructions:

Date: 08/06/20

9v1aV PEI

					QC 2 - 66	
					QC 2 - 64	
					QC 2 - 65	
					QC 2 - 5	
					QC 2 - 71	
					QC 2 - 73	
					QC 2 - 69	
					QC 2 - 76	
					QC 2 - 86	
					QC 2 - 83	
120	QC 8	3 pcs	7/15/20	0.00 0.00	QC 8 - 12	
					QC 8 - 14	7/20/07/20
					QC 8 - 17	
					QC 8 - 20	
					QC 8 - 25	
					QC 8 - 3	
					QC 8 - 32	
					QC 8 - 33	
					QC 8 - 35	
					QC 8 - 39	
					QC 8 - 4	
					QC 8 - 44	
					QC 8 - 45	
					QC 8 - 49	
					QC 8 - 58	
					QC 8 - 8	
					QC 8 - 9	
					QC 8 - 68	
					QC 8 - 67	
					QC 8 - 1 (A)	
					QC 8 - 47	
					QC 8 - 40	
					QC 8 - 52	
					QC 8 - 23	
					QC 8 - 57	
					QC 8 - 76	
					QC 8 - 61	
					QC 8 - 66	
					QC 8 - 73	
					QC 8 - 82	
130	Outsource - 15 - Nickel Plate	3 pcs	7/15/20	0.00 0.00	GR0002	2020-07-29
140	Packaging 2-1 - Receive - B4B	3 pcs	7/15/20	0.00 0.00	Packaging 2 - 1 - B4B	
					Packaging 2 - 2 - B4B	
					Packaging 2 - 3 - B4B	
					Packaging 2 - 5 - B4B	
					Packaging 2 - 4 - B4B	16 AUG 06 2020
					Packaging 2 - 6 - B4B	
					Packaging 2 - 7 - B4B	
					Packaging 2 - 8 - B4B	
					Packaging 2 - 9 - B4B	
					Packaging 2 - 10 - B4B	
					Packaging 2 - 11 - B4B	
					Packaging 2 - 12 - B4B	
					Packaging 2 - 13 - B4B	
					Packaging 2 - 14 - B4B	
					Packaging 2 - 15 - B4B	
					Packaging 2 - 16 - B4B	
					Packaging 2 - 17 - B4B	
					Packaging 2 - 18 - B4B	

					Packaging 2 - 19 - B4B	
					Packaging 2 - 20 - B4B	
					Packaging 2 - 21 - B4B	
					Packaging 2 - 22 - B4B	
					Packaging 2 - 23 - B4B	
					Packaging 2 - 24 - B4B	
					Packaging 2 - 25 - B4B	
					Packaging 2 - 26 - B4B	
					Packaging 2 - 37 - B4B	
					QC 6 - 9	
150 QC 6	3 pcs	7/15/20	0.00 0.00		QC 6 - 68	
					QC 6 - 61	
					QC 6 - 40	
					QC 6 - 81	
					QC 6 - 82	
160 Packaging 3-1 - Stock - B4B	3 pcs	7/15/20	0.00 0.00			
					Packaging 3 - 1 - B4B	
					Packaging 3 - 2 - B4B	
					Packaging 3 - 3 - B4B	
					Packaging 3 - 4 - B4B	
					Packaging 3 - 5 - B4B	
					Packaging 3 - 6 - B4B	
					Packaging 3 - 7 - B4B	
					Packaging 3 - 8 - B4B	
					Packaging 3 - 9 - B4B	
					Packaging 3 - 10 - B4B	
					Packaging 3 - 11 - B4B	
					Packaging 3 - 12 - B4B	
					Packaging 3 - 13 - B4B	
					Packaging 3 - 14 - B4B	
					Packaging 3 - 15 - B4B	
					Packaging 3 - 16 - B4B	
					Packaging 3 - 17 - B4B	
					Packaging 3 - 18 - B4B	
					Packaging 3 - 19 - B4B	
					Packaging 3 - 20 - B4B	
					Packaging 3 - 21 - B4B	
					Packaging 3 - 22 - B4B	
					Packaging 3 - 23 - B4B	
					Packaging 3 - 24 - B4B	
					Packaging 3 - 25 - B4B	
					Packaging 3 - 26 - B4B	
					Packaging 3 - 37 - B4B	
170 QC 21 - SA	3 pcs	7/15/20	0.00 0.00		QC 21 - SA - 21	
					QC 21 - SA - 70	
					QC 21 - SA - 9	

DAS
82
9-89

AUG 17 2020

DAS
82
9-89

AUG 17 2020

DAS
21
9-89

AUG 18 2020

Part Op 100 - ****CRITICAL PART - EXTREME CARE MUST BE TAKEN**** MUST ENSURE THE COMPONENTS ARE NEVER DAMAGE**** 1-Machine as per folio F FOLIO REV: AA DWG REV: PA2 2-Debur

110 - QC2- Inspect parts off machine FAI/FAIB

120 - QC8- Inspect parts - second check

130 - -Issue P/O; 40808 ELECTROLESS NICKEL PLATED -Material type; STEEL 1215 -Certificate of Conformity is required

140 - Certificate of Conformity is required

150 - QC6- All purchased or subcontracted products

160 - Identify as per dwg & Stock ****CRITICAL PART - EXTREME CARE MUST BE TAKEN**** MUST ENSURE THE COMPONENTS ARE NEVER DAMAGE****

170 - QC21- Final Inspection - Work Order Release

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
M1215R0.625	1215 Round Bar, 0.625" Diameter	.4125 (.1375 ea)	100-SL-154 - 1	<u>5286085</u>

Job Allocations				
Operation	Component Part	Required	Inventory	Allocated
100-SL-154 - 1	M1215R0.625	0	0	0
Part Specifications				
Specifications could not be found.				

Plex 7/7/20 11:06 AM Dart.Renwick.Jennifer

Date:

WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No.

Route update only



Job: _____		DISPOSITION						DEPARTMENT/PROCESS										
Part No. _____		Rework ☐ Scrap ☐ Use-as-is ☐						Skid-tube ☐ Cross tube ☐ Eng. (Non-AW) ☐ Machining ☐ Small Fab ☐ Prod. Eng. Coord. ☐ Large Fab ☐ Finishing ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐										
Date :	Sequence #:							QTY Affected :							MRB (QS1042)			
Description Work Order Deviation									Disposition									
																		Completed By
																		Lead hand / Supervisor
																		QC / QA Coordinator
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Preservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐																		
FAULT CATEGORY <!-- Column 1 --> Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Other/Details: <!-- Column 2 --> Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ <!-- Column 3 --> Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ <!-- Column 4 --> Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread ☐																		

124 and 125 (WOT MAIL)

124 and 125 (WOT MAIL)

124 and 125 (WOT MAIL)

124 and 125 (WOT MAIL)

124 and 125 (WOT MAIL)

124 and 125 (WOT MAIL)

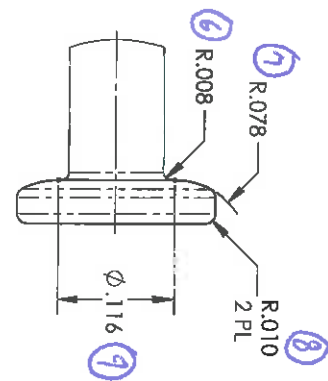
124 and 125 (WOT MAIL)

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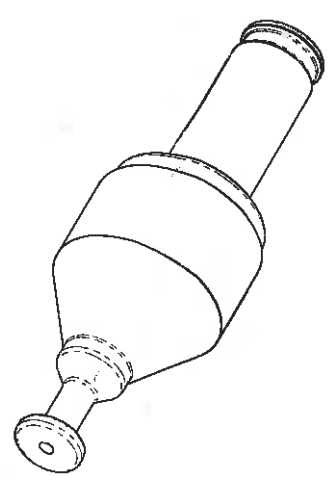
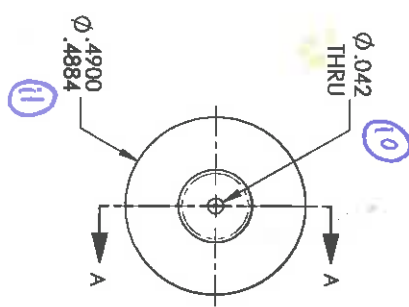
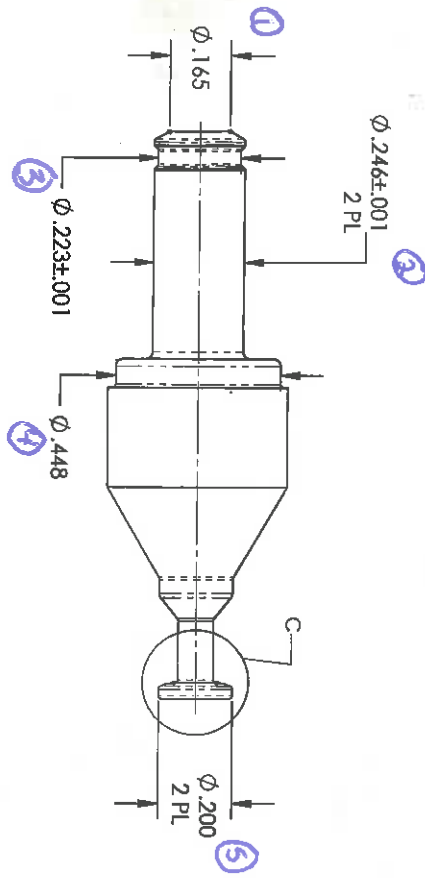
NOTES:

1. FINISH: MAXIMUM UNLESS OTHERWISE SPECIFIED ELECTROLESS NICKEL PLATE IAW ASTM B733 TYPE 4/5 SC 2
2. MATERIAL: AISI 1215 CARBON STEEL IAW AMS 5010 OR ASTM A29/A108/A576
3. DEBURR AND BREAK ALL SHARP EDGES
4. IDENTIFY IAW MPP-120
5. DIMENSIONAL LIMITS APPLY AFTER PLATING

32 MAX MEAS 344 17,2020



DETAIL C



650.8401

SHOP COPY
RETURN TO
ENGINEERING
(UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 210964

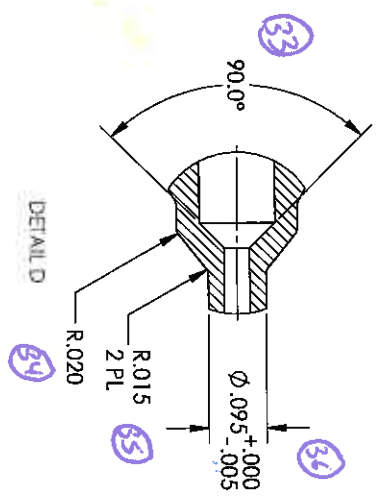
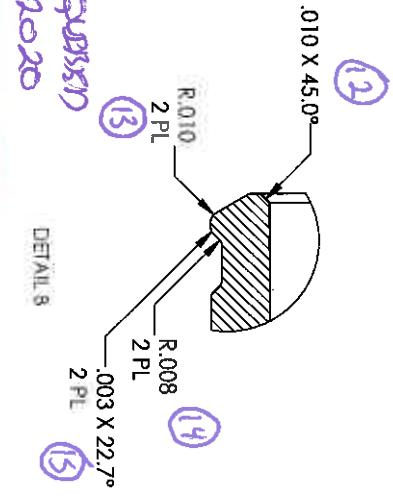
PROTOTYPE REVISIONS			
ZONE	REV	DESCRIPTION	DATE
A1-1	PA1	REMOVED METRIC DIMENSIONS ADDED NOTE DIMENSION WAS 0.4900±.0008 IS 0.4884±.0008 ADDED 90° DIMENSION	06/01/2020
A1-1	PA2	MODIFIED FINISH AND MATERIAL NOTE	06/22/2020

QTY	1	650.8401	PLUNGER	DATE	06/01/2020	APPROVED	T. CROSS
REV	1	650.8401	PLUNGER	DATE	06/01/2020	APPROVED	T. CROSS
REV	2	650.8401	PLUNGER	DATE	06/22/2020	APPROVED	T. CROSS

QTY	1	650.8401	PLUNGER	DATE	06/01/2020	APPROVED	T. CROSS
REV	1	650.8401	PLUNGER	DATE	06/01/2020	APPROVED	T. CROSS
REV	2	650.8401	PLUNGER	DATE	06/22/2020	APPROVED	T. CROSS

QTY	1	650.8401	PLUNGER	DATE	06/01/2020	APPROVED	T. CROSS
REV	1	650.8401	PLUNGER	DATE	06/01/2020	APPROVED	T. CROSS
REV	2	650.8401	PLUNGER	DATE	06/22/2020	APPROVED	T. CROSS

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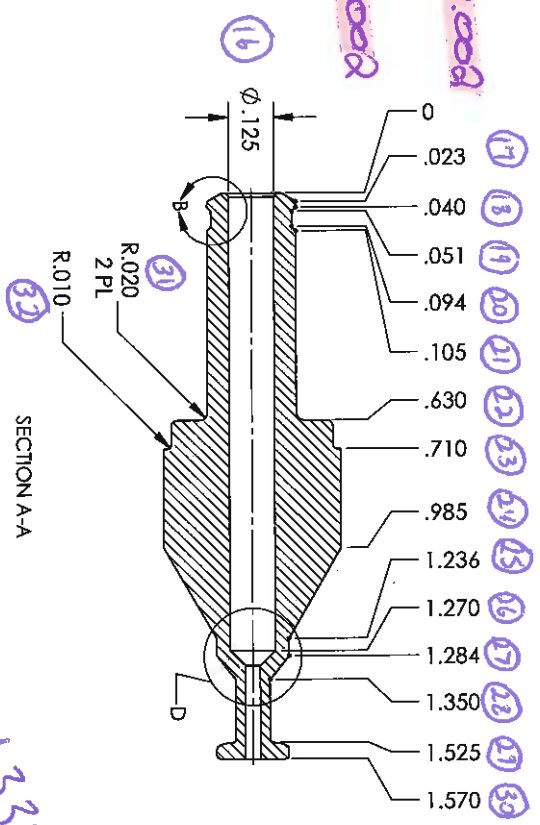
T01 632
T02 11
63 1/4 spotter (5)
64 1/8 drill (5)
T12 Groove

PLUNGER REQUESTED
DATE JULY 17, 2020

18 0.040 +/- 0.002

21 0.105 +/- 0.002

29 1.525 +/- 0.002



1.3325

APICAL INDUSTRIES	
3002 TERRY HEIGHTS DR	2700
OCEANVILLE, CT 06846-3112	(203) 724-5100
PLUNGER	
DATE: 07/17/20	SCALE: 1:1
650 B400	PLC
SHEET 3 OF 3	

DART AEROSPACE LTD		Work Order:
Description: <u>PLUNGER</u>		Part Number: <u>650,8401</u>
Inspection Dwg: <u>650,8400</u> Rev: <u>PA2</u>		Page 1 of 1

INSPECTION SHEET

	Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
1	0,165	± 0,005	0,167	✓		MJP-04	ICRN
2	0,246	± 0,001	0,2455	✓			
3	0,223	± 0,001	0,222	✓			
4	0,448	± 0,005	0,447	✓			
5	0,200	± 0,005	0,200	✓			
6	R 0,008	± 0,005	0,008	✓			
7	R 0,078	± 0,005	0,078	✓			
8	R 0,010	± 0,005	0,010	✓			
9	0,116	± 0,005	0,116	✓			
10	Ø 0,042	± 0,004 0,001	0,042	✓			
11	0,4884/0,4900	± —	0,4884	✓			
12	0,010 x 45°	± 0,005 ± 0,5°	0,010 x 45°	✓			
13	R 0,010	± 0,005	0,010	✓			
14	0,003 x 22,7°	± 0,005 ± 0,5°	0,003 x 22,7°	✓			
15	R 0,008	± 0,005	0,008	✓			
16	Ø 0,125	± 0,004 0,001	0,125	✓			
17	0,023	± 0,005	0,023	✓			
18	0,040	± 0,0082	0,040	✓			
19	0,051	± 0,005	0,051	✓			
20	0,094	± 0,008	0,094	✓			
21	0,105	± 0,005	0,105	✓			
22	0,630	± 0,005	0,630	✓			
23	0,710	± 0,005	0,710	✓			
24	0,985	± 0,005	0,985	✓			
25	1,236	± 0,005	1,236	✓			
26	1,270	± 0,005	1,270	✓			
27	1,284	± 0,005	1,284	✓			
28	1,350	± 0,005	1,350	✓			
29	1,525	± 0,0082	1,525	✓			
30	1,570	± 0,005	1,572	✓			
31	R 0,020	± 0,005	0,020	✓			
32	R 0,010	± 0,005	0,010	✓			

Measured by: <u>33</u>	Checked by: <u>mf</u>	QC Inspector:
Date: <u>20/07/15</u>	Date: <u>20/07/20</u>	Date:

Engineering Approval: (if necessary)	Date:
--	--------------

Rev	Date	Change	Revised by	Approved
B	14.07.31	New Issue	KJ	



Freight Terms:
Special Comments:

Plex 8/5/20 4:05 PM Dart.Guerin.Kimberley



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada
Tel (613) 632-5200

PURCHASE ORDER

POHB046808



Items

Line Item	Job	Part	Drawing	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
2	210518	C10-4-2	C10-4-2 Rev 2A	Lower Lock Roller (Outside Processing - Nickel Plate) - Issue P/O; -All noncertified parts specifying a finish of Nickel Plating per QQ-N-290, or parts with drawings that are missing a specification Can be Nickel Plated per ASTM B733 Type 4/5, SC0-SC4 or MIL-C-26074 Class 1/2 -Material type 4140 -Heat treat must be carried out to specified hardness if noted on the drawing. -Plating thickness must be carried out as specified on the drawing. -Certificate of Conformity is required	Firmed <i>XIC</i>	-	8/6/20	10 pcs	0 pcs	10 pcs	\$13.4375/pcs	\$134.38
Grand Total:											\$215.00	

AUG 6 6 2020



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER

POHB046808



Order Notes

Procurement Quality Clauses

A005 right of entry
A012 chemical and physical test report
A016 personnel qualification
A017 raw material identification (as applicable)

A022 Apical Processing
A024 process certifications
A026 certification of material **conformance**

A041 quality management system
A042 dart notification by supplier
A043 retention of quality documents

A048 counterfeit parts avoidance, detection, mitigation and disposition program

A049 supplier awareness

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Plex 8/5/20 4:05 PM Dart.Guerin.Kimberley



Certificat de Conformité / Certificate of Compliance



0 2 9 9 3 0 - 1

2455, Rue Halpern | Saint-Laurent | Québec | H4S 1N9
 Tel: 514-335-3666 Fax: 514-335-3868
 www.groupealtech.com

Bon de Livraison / Packing Slip

029930 - 1

Livré à / Ship to

DART AEROSPACE LTD
 1270 ABERDEEN STREET
 HAWKESBURY, ON, K6A1K7
 CANADA
 Tel.: 613-632-5200 Fax.:

Client / Customer:

DART AEROSPACE LTD
 1270 ABERDEEN STREET
 HAWKESBURY, ON, K6A1K7
 CANADA
 BUYER:

Date expédition Ship date		Créé Par Generated By		Transport / No de Compte Courier / Acc. No		Bon de commande Client Customer Purchase Order No				
31-Jul-2020		Ian Wilson				POHB046808				
Signa Line#	No. de Série / # Pièce Part Number / Line Item Details Job # / Ref #	Description pièce(s)		CATG. U/M	Comm. /Ordered	Exp/ Shipped	Quantités / Quantities Qté NC/ NC Qty		Qté Scrap	À venir / Back Order
1	650.8401 REV.PA3 Rev.	650.8401 REV.PA3 01-E-NIC STEEL 500 [E-NICKEL STEEL 500] ASTM B733 TYPE 4/5 SC 2 - 0.0005"		E-NICKEL STEEL CH	6	6	0		0	0
2	C10-4-2 REV 2A Rev.	***EXTREMELY CRITICAL PARTS*** C10-4-2 REV 2A 01-E-NIC STEEL E-NICKEL STEEL QQ-N-290 ASTM B733, TYPE 4/5 0.0004" - 0.0006" BAKE AFTER		E-NICKEL STEEL CH	10	10	0		0	0

DAS
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9-89

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AUG 05 2020
DART AEROSPACE LTD.

DAS
82
9-89

RECEIVED
 AUG 05 2020
 DART AEROSPACE LTD.

Notes Additionnelles / Additional Notes

Épaisseur réelle
 Actual Thickness

Inspecteur Qualité
 Quality Inspector

Réçu par
 Received By

Nous certifions que les pièces énumérées ci-dessus ont été traitées en conformité avec votre commande et vos spécifications et rencontrent les exigences.
 Notre responsabilité financière et légale ne sera pas supérieure au montant de la facture issue.

We hereby certify that the parts listed above have been process in accordance with your purchase order and specifications and are in conformance with your requirements.
 Our financial and legal responsibility will not be higher than the amount of invoice.



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER POHB046663



Supplier: MCM001-VU
McMaster-Carr Supply Co.,
P.O. Box 7890
Chicago, IL 60680-7890 USA
Phone: 330 995 6500
Fax: 330 995 9800

Attention: N/A.

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

PO No: POHB046663

PO Date: 6/30/20

Due Date: 7/3/20

Purchase Order

Revision:

Revision Date:

Issued By: Guerin, Kimberley
Phone: 613-632-5200 Ext 298
kgu@dartaero.com

Via: Ground

Pynt Terms: Net 60

Freight Terms:

Special Comments:

Items													
Line Item	Job	Part	Drawing	Supplier Part No	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (USD)	Extended Price
1	210829	1173N124		10/pk	O-Ring	Firmed	-	7/3/20	10 Ea	0 Ea	10 Ea	\$1.375/Ea	\$13.75
2		20625A814		1/pk	Dial Indicator Attachmnt Agd- 2 Dial	Firmed	-	7/3/20	1 lbs	0 lbs	1 lbs	\$6.63/lbs	\$6.63
		6102N3		3 ft length	Tight- Tolerance 1215 Carbon Steel Rod, Easy-to- Machine, 5/8" Diameter	Firmed	-	7/3/20	3 ft	0 ft	3 ft	\$9.8033/ft	\$29.41
4		7787181		6 ft	Low-Carbon Steel Round Tube, 0.188" Wall Thickness, 3/4" OD	Firmed	-	7/3/20	6 ft	0 ft	6 ft	\$8.51/ft	\$51.06
5		89565K998		3 ft length	Tube	Firmed	-	7/3/20	15 ft	0 ft	15 ft	\$14.8133/ft	\$222.39
6	210811	92778A067		25/pk	18-8 Stainless Steel Oval-Tip Set Screws, 6- 32 Thread, 1/8" Long	Firmed	-	7/3/20	25 Ea	0 Ea	25 Ea	\$0.1248/Ea	\$3.12
7		9659K41		10/pk	O-Ring	Firmed	-	7/3/20	10 Ea	0 Ea	10 Ea	\$1.268/Ea	\$12.68
8	210889	9942K31		25/pk	Trigger Ball	Firmed	-	7/3/20	25 Ea	0 Ea	25 Ea	\$0.3884/Ea	\$9.71
9		C45-11-2	C45	90145A510 20/pk	Locating Pin	Firmed	-	7/3/20	20 Ea	0 Ea	20 Ea	\$0.423/Ea	\$8.46

Plex 6/30/20 1:03 PM Dart Guerin, Kimberley



Packing List

200 Aurora Industrial Pkwy
Aurora OH 44202-8087
330-995-5500
cle.sales@mcmaster.com

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury ON K6A 1K7
Canada

Purchase Order
POHB046863

Order Placed By
Kim

McMaster-Carr Number
7440461-02

Page 1 of 2

06/30/2020

Line	Product	Ordered	Shipped
2	8102N3 Tight-Tolerance 1215 Carbon Steel Rod, Easy-to-Machine, 5/8" Diameter, 3 Feet Long	1 Each	1

RECEIVED

Shipped separately from our Cleveland warehouse on 06/30

JUL 0 3 2020

4	776/T61 Low-Carbon Steel Round Tube, 0.188" Wall Thickness, 3/4" OD, 6 Feet Long	1 Each	1
5	89955K998 Easy-to-Weid 4130 Alloy Steel Round Tube, 0.188" Wall Thickness, 5/8" OD, 3 Feet Long	5 Each	5
1	20825A914 Mitutoyo Model 101039 Flat Back for Plunger-Style Variance Indicator	1 Each	1
3	1173N124 High-Temperature Soft Silicone O-Ring, 3/32 Fractional Width, Dash Number 124	1 Pack	1
6	92778A067 18-8 Stainless Steel Oval-Tip Set Screws, 6-32 Thread, 1/8" Long	1 Pack	1
7	93705A195 18-8 Stainless Steel Thread-Locking Socket Head Screw, 6-32 Thread Size, 5/8" Long	1 Pack	1
8	8559K41 Ultra-Chemical-Resistant Rigid PTFE O-Ring, 1/8 Fractional Width, Dash Number 219	1 Pack	1
10	90145A510 18-8 Stainless Steel Dowel Pin, 3/16" Diameter, 1" Long	1 Pack	1
11	98410A110 External Retaining Ring for 3/16" OD, Beryllium Copper	1 Pack	1
12	95806A180 Nylon Plastic Washer for 1/2" Screw Size, 0.552" ID, 0.75" OD, Off-White	1 Pack	1
13	7216K5 Hinged Straight-Blade Housing, Hinged, 3-Blade Plug, Grounded, NEMA 5-15, Yellow	30 Each	30
14	7216K6 Hinged Straight-Blade Housing, 3-Slot Socket, NEMA 5-15, Yellow	30 Each	30

Hub
1 - Part # CDR 007896795

McMASTER-CARR

5281085

Tight-Tolerance 1215 Carbon Steel Rod
Easy-to-Machine, 5/8" Diameter\$29.41 Each
8102N3

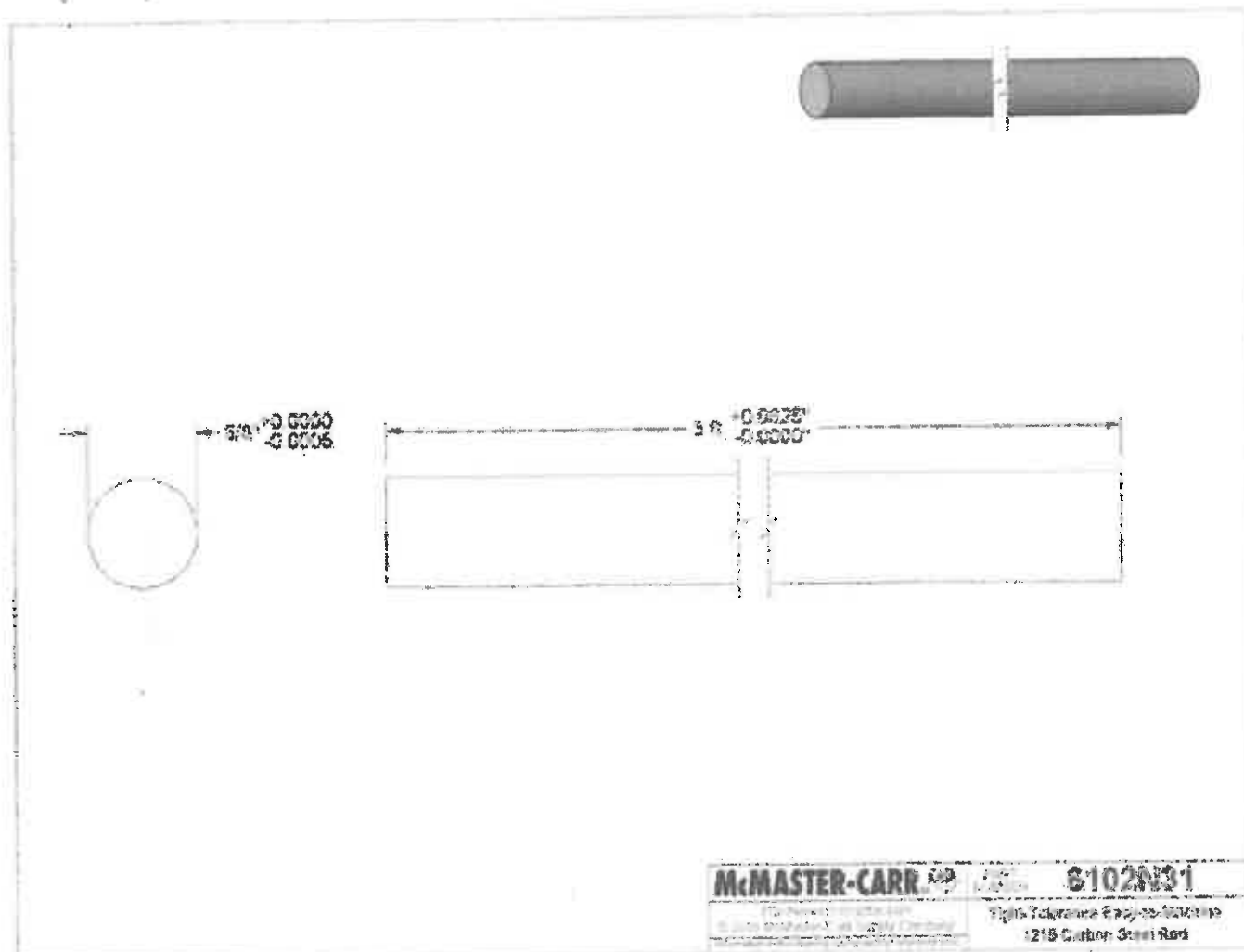
Material	1215 Carbon Steel
Shape	Rod and Disc
Shape Type	Rods
Diameter	5/8"
Diameter Tolerance	-0.001" to 0"
Tolerance Rating	Tight Undersized
Yield Strength	Not Rated
Fabrication	Cold Worked
Hardness	Not Rated
Hardness Rating	Medium
Maximum Hardness After Heat Treatment	Not Rated
Heat Treatable	Yes
Certificate	Material Certificate with Traceable Lot Number
Mechanical Finish	Precision Ground
Appearance	Plain
Temperature Range	Not Rated
Specifications Met	ASTM A108
Straightness Tolerance	0.003" per ft
Elongation	Not Rated
Material Composition	
Carbon	0.08%
Manganese	0.75-1.05%
Phosphorus	0.04-0.09%
Sulfur	0.25-0.35%
Iron	Remainder
Warning Message	Physical and mechanical properties are not guaranteed. They are intended only as a basis for comparison and not for design purposes.
Length Tolerance	Plus
Length	3 ft.
RoHS	RoHS 3 (2015/863/EU) Compliant
REACH	REACH (EC 1907/2006) (01/16/2020, 205 SVHC) Compliant
Country of Origin	United States

Precision ground and held to a strict tightness tolerance, these rods are ready for turning in a lathe. A lead-free alternative to 12L14, 1215 carbon steel contains the same amount of sulfur and phosphorus for excellent machinability. It is often used for shaft couplings, studs, and pins.

06/07/2020

Tight-Tolerance 1215 Carbon Steel Rod, Easy-to-Machine, 5/8" Diameter | McMaster-Carr

Length, Feet : 3



The information in this 3-D model is provided for reference only.

LINES 3

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: 6102N3
 DATE: JUL 05 2020
 MATERIAL CERT REC'D: YES
 QUANTITY RECEIVED: 3 FT
 QUANTITY INSPECTED: 3 FT
 QUANTITY REJECTED: —

PO / BATCH NO: POM130-16663
5286085
 THICKNESS ORDERED: .625
 THICKNESS RECEIVED: .626
 SHEET SIZE ORDERED: —
 SHEET SIZE RECEIVED: —

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y (N)	
CORRECT FINISH	Y (N)	
CORROSION	Y (N)	
CORRECT GRAIN DIRECTION	Y (N)	
CORRECT MATERIAL PER M-DRAWING	Y (N)	ASTM A108
CORRECT THICKNESS	Y (N)	
PHOTO REQUIRED	Y (N)	
CORRECT REF # TO LINK CERT	Y (N)	6102N3 McMASTER/CARL
CORRECT MATERIAL IDENTIFICATION	Y (N)	
CORRECT M# ON THE MATERIAL	Y (N)	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y (N)	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y (N)	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION		ENGINEERING SIGNOFF (if required)	
INSPECTED BY: _____	DATE: <u>JUL 05 2020</u>	SIGNED OFF BY: _____	DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

^XA^MCY^XZ^XA^SZ2~JSN^LT0^FO407,607^GB156,568,2^FS^FO420,873^A0R,29,30^FH_^FL_5F